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EXAMINER	
KANAAN, SIMON P	

ART UNIT	PAPER NUMBER
2432	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/564,738	HUM ET AL.	
	Examiner	Art Unit	
	SIMON KANAAN	2432	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to applicant's amendment filed on 2/17/2009 for Application No. 10564738.

2. Applicant's arguments/ amendments with respect to pending claims 15 through 49 filed 2/17/2009, have been fully considered but are not persuasive. Applicant did not distinctly point out which limitations are not taught by the cited references. Examiner has specifically pointed out the location at which the prior art references teaches each limitation below.

Claim Objections

3. As per claim 36, applicant recites "plurality of island". Please amend to "plurality of islands".

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. As per claims 15, 24 and 42, contain the limitation, "substantially the same", renders this claim as vague and indefinite. It is not clear to the examiner what substantially similar is, it is subject to interpretation. It appears to the examiner that applicants refers to "substantially the same" to meaning "identical" therefore, applicants might consider amending claims 15, 24 and 42 to read – identical.

7. Claims 16-33 are rejected under 35 U.S.C. 112 as indefinite for at least the reason stated above. Claims 16-33 are depended on claim 15, however, they do not add any feature or subject matter that would solve any of the non-statutory deficiencies of claim 15.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 15, 16, 19-36, 39-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Challener in view of Rappaport et al. (US 2003/0023412A1).

As per claim 15, Challener discloses a method for detecting and geographically locating a user accessing a wireless computer network wirelessly, the method comprising: pre-collecting and pre-mapping performance parameters of wireless computers with respect to at least one access point within a geographical area covered by the wireless computer network; - Challener, page 5, lines 16 through 18, the area

around an access point is an island and helps determine the geographical locations of rogue user

identifying the user based at least on a Media Access Control (MAC) address and Internet Protocol (IP) address; - Challener, page 11, lines 26 and 27, both MAC address and IP address are used

but fails to disclose explicitly obtaining a spatial performance model for the geographical area based on the collected performance parameters, the spatial performance model is defined by a plurality of islands, each island shares substantially the same performance parameters; acquiring at least one performance parameter of the user; mapping and matching the at least one performance parameter acquired for the user on the spatial performance model to identify the matched island; and identifying a geographical location of the user through the matched island

However, Rappaport discloses obtaining a spatial performance model for the geographical area based on the collected performance parameters, the spatial performance model is defined by a plurality of islands, each island shares substantially the same performance parameters; - Rappaport, page 11, paragraph 98, lines 3, 20, the signal strength is one of the parameters used to create models page 11, paragraph 98, lines 38, performance parameters are used as indices.

Acquiring at least one performance parameter of the user; mapping and matching the at least one performance parameter acquired for the user on the spatial performance model to identify the matched island; and identifying a geographical location of the user through the matched island. - Rappaport, page 11, paragraph 98,

lines 38, performance parameters are used as indices, if parameter is out of range system is triggered, page 11, paragraph 98, lines 20, the signal strength is one of the performance parameters, performance parameters are used as indices, if parameter is out of range system is triggered, page 10 paragraph 96, lines 17 through 21, average and worst-case of metrics are retrieved

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the geographical model as taught by Challener with geographical model as taught by Rappaport because Rappaport's model can quantify performance specific information and aid in troubleshooting- Rappaport, page 12, [0102], lines 1-9.

As per claim 34. Challener discloses a system for detecting and geographically locating a user accessing a wireless computer network having at least one wireless access point wirelessly, - Challener, page 5, lines 16 through 18, the area around an access point is an island and helps determine the geographical locations of rogue user)

the system comprising: a network management system residing on a computer system of the wireless computer network, the network management system operationally detects users accessing to the wireless computer network and acquires one or more performance parameters of the users; - Challener, page 5, lines 15 through 17, network administrator or manager can identify presence of rogue user and determine their geographical location

wherein the network management system operationally detects users and identifies at least a MAC address and IP address of the users and acquiring at least one

performance parameter of the users, - Challener, page 11, lines 26 and 27, both MAC address and IP address are used

thereby identifying a geographical location of the user through the matched island. - Challener, page 5, lines 15 through 17, network administrator or manager can identify presence of rogue user and determine their geographical location, it is an inherent property of computer networking that as long as the systems are electronically connected they need not be in same vicinity, see also page 7, lines 19 and 20, user need not be wandering to find rogues user

but fails to disclose explicitly a spatial performance model defining a plurality of islands of performance parameters, the performance parameters are obtained through pre collecting and pre- mapping over a geographical area covered by the wireless computer network; the system is operable to map and match the at least one performance parameter acquired for the user on the spatial performance model to identify a matched island for each user,

However, Rappaport discloses a spatial performance model defining a plurality of islands of performance parameters, the performance parameters are obtained through pre collecting and pre- mapping over a geographical area covered by the wireless computer network; - Rappaport, page 11, paragraph 98, lines 3, 20, the signal strength is one of the parameters used to create models page 11, paragraph 98, lines 38, performance parameters are used as indices.

the system is operable to map and match the at least one performance parameter acquired for the user on the spatial performance model to identify a matched

island for each user, - Rappaport, page 11, paragraph 98, lines 38, performance parameters are used as indices, if parameter is out of range system is triggered, page 11, paragraph 98, lines 20, the signal strength is one of the performance parameters, performance parameters are used as indices, if parameter is out of range system is triggered, page 10 paragraph 96, lines 17 through 21, average and worst-case of metrics are retrieved

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the geographical model as taught by Challener with geographical model as taught by Rappaport because Rappaport's model can quantify performance specific information and aid in troubleshooting- Rappaport, page 12, [0102], lines 1-9.

As per claims 16 and 36, Challener in view of Rappaport discloses the method according to claim 15, further comprising deriving at least one network performance index for each island. – It would be obvious to use Rappaport, page 11, paragraph 98, lines 38, performance parameters are used as indices for the same motivation as above

As per claims 19 and 39, Challener in view of Rappaport discloses the methods according to claims 15 and 35 respectively, further comprising matching the user's MAC address and IP address with a database to identify if the user is an authorized user. - Challener, page 11, lines 26 and 27, both MAC address and IP address are used

As per claim 20, Challener in view of Rappaport discloses the method according to claim 15, wherein the user is identified as a potential rogue user if the user is not the

authorized user. – It would be obvious to use Rappaport, page 11, paragraph 98, performance parameters are used as indices, if parameter is out of range system is triggered, is the performance index does not match the island, hence is out of range a trigger is generated. i.e. rogue user is identified, for the same motivation as above

As per claim 21, Challener in view of Rappaport discloses the method according to claim 15, further comprising effecting at least one network security measure against the rogue user. – It would be obvious to use Rappaport , page 11, paragraph 98, if triggered security measure taken, for the same motivation as above

As per claims 22 and 40, Challener in view of Rappaport discloses the methods according to claims 16 and 34 respectively, further comprising: deriving at least one performance index for the user; and determining the geographical location of the user by comparing the performance index of the user with historical, average performance indices of each island pertinent to the time of detection of the user. – It would be obvious to use Rappaport, page 11, paragraph 98, the signal strength is one of the performance parameters, the signal strength whether is measured at the access point or measured from user can be measured the same way and performance parameters are used as indices, if parameter is out of range system is triggered, is the performance index does not match the island, hence is out of range a trigger is generated, for the same motivation as above

As per claims 23 and 41, Challener in view of Rappaport discloses the methods according to claims 16 and 34 respectively, wherein deriving of the at least one performance index comprising dynamically re-mapping the islands previously mapped based on a current performance index of each island at time intervals. - It would be obvious to use Rappaport, page 11, paragraph 98, line 5, data is exchanged in real time between the models and equipment, for the same motivation as above

As per claims 24 and 42, Challener in view of Rappaport discloses the methods according to claims 22 and 34 respectively, wherein deriving of the performance index of the user is substantially the same as deriving of the performance index of each island. - – It would be obvious to use Rappaport, page 11, paragraph 98, lines 20, the signal strength is one of the performance parameters; the signal strength whether is measured at the access point or measured from user can be measured the same way, for the same motivation as above.

As per claim 25, Challener in view of Rappaport discloses the method according to claim 22, wherein identifying the geographical location of the user comprising matching the performance indices of the at least one island with the performance index of the user. – It would be obvious to use Rappaport , page 11, paragraph 98, lines 38, performance parameters are used as indices, if parameter is out of range system is triggered, is the performance index does not match the island, hence is out of range a trigger is generated, for the same motivation as above

As per claim 26, Challener in view of Rappaport discloses the method according to claim 21, wherein affecting at least one network security measure comprising: logging particulars of the potential rogue user; - Challener, page 9 and 10, lines 20 through 7, the server receives information, including signal strengths to determine location of rogue user

displaying geographical location of the potential rogue user; and denying access to the potential rogue user. - Challener, page 5, lines 19 through 20, administrator can control activity of rogue user, which includes denying access.

As per claims 27 and 43, Challener in view of Rappaport discloses the methods according to claims 15 and 34 respectively, wherein the performance parameters includes variables defined at any of a physical layer, a network layer, an application layer and a data link layer. – It would be obvious to use Rappaport, page 11, paragraph 98, lines 3, 20, the signal strength is one of the parameters used to create models and is in the physical layer, performance parameters are used as indices, for the same motivation as above.

As per claims 28 and 44, Challener in view of Rappaport discloses the methods according to claims 27 and 34 respectively, wherein the physical layer includes any or all of signal strength, noise power and signal-to-noise ratio. – It would be obvious to use Rappaport, page 11, paragraph 98, lines 3, 20, the signal strength is one of the

parameters used to create models; and page 11, paragraph 98, lines 38, performance parameters are used as indices, for the same motivation as above.

As per claims 29 and 45, Challener in view of Rappaport discloses the methods according to claims 27 and 44 respectively, wherein the network layer includes any or all of ping response time, packet round-trip time, packet loss rate and propagation delay times. – Examiner is giving official notice that it is well known in the art to monitor ping response time as a performance parameter. – It would be obvious to use Rappaport, page 11, paragraph 98, lines 10-20, packet loss rate is one of the performances measured, for the same motivation as above.

As per claims 30 and 46, Challener in view of Rappaport discloses the methods according to claims 27 and 44 respectively, wherein the application layer includes any or all of transactions responses, applications responses and end-to-end delay times. – It would be obvious to use Rappaport, page 11, paragraph 98, lines 10-20, packet delay time is one of the performances measured, for the same motivation as above.

As per claims 31 and 47, Challener in view of Rappaport discloses the methods according to claims 27 and 44 respectively, wherein the data link layer includes any or all of link utilization, frame loss rate, number of error frames and throughput rate. – It would be obvious to use Rappaport, page 11, paragraph 98, lines 10-20, frame error rate is one of the performances measured, for the same motivation as above.

As per claims 32 and 48, Challener in view of Rappaport discloses the methods according to claims 15 and 34 respectively, wherein the spatial performance model differs at a particular period of the day. – It would be obvious to use Rappaport, page 11, paragraph 98, line 5, data is exchanged in real time between the models and equipment, i.e. the performance model would defer at different times of the day since it is updated real time, for the same motivation as above.

As per claims 33 and 49, Challener in view of Rappaport discloses the methods according to claims 15 and 34, wherein the performance parameters include any of distance from access point, number of wireless users, network topology, building material used and time of day. – It would be obvious to use Rappaport, page 11, paragraph 98, lines 3, 20, the signal strength is one of the parameters used to create models page 11, paragraph 98, lines 38, performance parameters are used as indices, signal strength is dependent on distance from access point among other factors as material used, for the same motivation as above.

As per claim 35, Challener in view of Rappaport discloses the system according to claim 34, wherein the at least one wireless access point is connected to a wired computer network. – Challener, page 5, lines 1 through 4, devices are connected wirelessly or wired, and hence the network has wireless access points connected to a wired network

10. Claims 17, 18, 37, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Challener in view of Rappaport and further in view of Agrawal et al. (US 2003/0045270A1).

As per claims 17 and 18, Challener in view of Rappaport disclose a method according to claim 16,

but fail to disclose expressly wherein deriving the network performance index comprising: obtaining differences between the acquired performance parameters of the user and the performance parameters in the spatial performance model; determining a minimum value for each difference; normalizing the acquired performance parameters for each difference to obtain a rank number; and summing the rank number for each island to obtain the network performance index.

However, Agrawal discloses obtaining differences between the acquired performance parameters of the user and the performance parameters in the spatial performance model; - Agrawal, page 2, paragraph 17, lines 1 through 6, the parameters of the users are tracked and compared to the model, deviations are obtained by obtaining the differences

determining a minimum value for each difference; - Agrawal, page 2, paragraph 17, lines 1 through 6, the parameters of the users are tracked and compared to the model, deviations are obtained by obtaining the differences also page 1, paragraph 16, lines 12 through 15, the model is updated. Since the model given one difference is

updated but in another is considered a deviation there exists a minimum difference level which is set in order differentiate from updating the model to determining there is a deviation

normalizing the acquired performance parameters for each difference to obtain a rank number; - Agrawal, page 2, paragraph 14, normalized histogram which is a probability density function of the exact location the user

and summing the rank number for each island to obtain the network performance index. - Agrawal, page 2, paragraph 14, normalized histogram which is a probability density function of the exact location the user

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the geographical model as taught by Challener with geographical model as taught by Agrawal because Agrawal's model detects network fraudulent behavior which leads to loss of significant revenue as well as financial loss and personal inconvienience for individual users who are the victims of fraud- Agrawal, page 1, [0002], last 5 lines in paragraph.

As per claim 37, Challener and Rappaport disclose the system according to claim 36,

but fail to disclose expressly wherein the network performance index is a sum of rank number of each island, wherein the rank number is obtained through normalizing the acquired performance parameters by a differences between the acquired

performance parameters of the user and the performance parameters in the spatial performance model.

However, Agrawal discloses wherein the network performance index is a sum of rank number of each island, wherein the rank number is obtained through normalizing the acquired performance parameters by a differences between the acquired performance parameters of the user and the performance parameters in the spatial performance model.- Agrawal, page 2, paragraph 14, normalized histogram which is a probability density function of the exact location the user

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the geographical model as taught by Challener with geographical model as taught by Agrawal because Agrawal's model detects network fraudulent behavior which leads to loss of significant revenue as well as financial loss and personal inconvienience for individual users who are the victims of fraud- Agrawal, page 1, [0002], last 5 lines in paragraph.

As per claim 38, Challener and Rappaport disclose the system according to claim 36, but fail to disclose expressly wherein the network performance index is a sum of differences of rank numbers of performance parameters in the spatial performance model and the acquired performance parameters of the user, of which, the performance parameters of the spatial performance model and the users are normalized by a minimum values of each performance parameter in the spatial performance model.

However, Agrawal discloses wherein the network performance index is a sum of differences of rank numbers of performance parameters in the spatial performance model and the acquired performance parameters of the user, of which, the performance parameters of the spatial performance model and the users are normalized by a minimum values of each performance parameter in the spatial performance model. - Agrawal, page 2, paragraph 14, normalized histogram which is a probability density function of the exact location the user

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the geographical model as taught by Challener with geographical model as taught by Agrawal because Agrawal's model detects network fraudulent behavior which leads to loss of significant revenue as well as financial loss and personal inconvienience for individual users who are the victims of fraud- Agrawal, page 1, [0002], last 5 lines in paragraph.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

12. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SIMON KANAAN whose telephone number is (571)270-3906. The examiner can normally be reached on Mon-Thurs 7:30-5:00 EST.

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 5712723799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

/SIMON KANAAN/
Examiner, Art Unit 2432

/Gilberto Barron Jr./
Supervisory Patent Examiner, Art Unit 2432